

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for measuring a differential mode delay (DMD) of a multimode optical fiber comprising:

monitoring a temperature change within a measurement time in a DMD measurement of the multimode optical fiber, during a measurement time of the DMD of the optical fiber;

measuring a change of temperature of the optical fiber during the measurement time; and

controlling the temperature of the optical fiber such that an absolute value of the change of temperature of the optical fiber is maintained within a predetermined range during the measurement time

wherein the DMD measurement is carried out in an environment in which a magnitude of temperature change is controlled.

2. (currently amended): The method for measuring a differential mode delay (DMD) of a multimode optical fiber according to claim 1, wherein the predetermined range is calculated such that a product of a the measurement time and a rate of temperature change during the measurement of the measured DMD of the optical fiber is 0.4°C or less.

3. (currently amended): The method for measuring a differential mode delay (DMD) of a multimode optical fiber according to claim 1, wherein the predetermined range is calculated

such that a product of the measurement time and a rate of temperature change during the measurement of the measured DMD of the optical fiber is 0.3°C or less.

4. (currently amended): The method for measuring a differential mode delay (DMD) of a multimode optical fiber according to claim 1, wherein the predetermined range is calculated such that the measurement is carried out in an environment in which a rate of temperature change of the ambient environment is controlled to $\pm 1.0^{\circ}\text{C}/\text{hour}$ or less.

5. (currently amended): The method for measuring a differential mode delay (DMD) of a multimode optical fiber according to claim 1, wherein the measurement time is set within not more than 10 minutes.

6. (currently amended): The method for measuring a differential mode delay (DMD) of a multimode optical fiber according to claim 1, wherein the measurement time is set within not more than 3 minutes.

7. (currently amended): The method for measuring a differential mode delay (DMD) of a multimode optical fiber according to claim 1, wherein the predetermined range is calculated such that the measurement is carried out in an environment in which a rate of temperature change of the ambient environment is controlled to $\pm 1.0^{\circ}\text{C}/\text{hour}$ or less and the measurement time is set within not more than 10 minutes.

8. (currently amended): The method for measuring a differential mode delay (DMD) of a multimode optical fiber according to claim 1, wherein the DMD measurement is carried out after further comprising:

prior to the measurement time of the DMD of the optical fiber, placing the optical fiber to be measured in the a measurement environment until a the temperature of the optical fiber substantially equals a temperature of the measurement environment before carrying out the DMD measurement.

9. (new): The method for measuring a differential mode delay (DMD) of a multimode optical fiber according to claim 1, wherein the measurement time is not more than 5 minutes.

10. (new): The method for measuring a differential mode delay (DMD) of a multimode optical fiber according to claim 1, wherein the predetermined range is calculated such that a rate of temperature change of the ambient environment is controlled to $\pm 5.0^{\circ}\text{C}/\text{hour}$ or less